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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
10 028,288	12 28 2001	Jimmy A. Tatum	V637-02312 US	2960

2890 03 10 2003

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EXAMINER

LOUIE, WAI SING

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 03 10 2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,288

Examiner

Wai-Sing Louie

Applicant(s)

TATUM ET AL

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Chun et al. (US 5,625,732).

With regard to claim 1, Chun et al. disclose an optical interface unit (col. 2, line 18 to col. 9, line 50 and fig. 3) comprising:

- A submount 201 having a plurality of conductive traces 213 on the surface and a plurality of conductive vias 221 and 226 that pass through a body of the submount 201 (fig. 2);
- A semiconductor array 121 comprised of semiconductor elements 107 and 116, the semiconductor array 121 attached to the submount 102 such that the semiconductor elements 107 and 116 are electrically connected to the plurality of conductive vias 221 and 226 (fig. 1 and 3);
- A plurality of bonding wires 129 and 132 electrically connecting the semiconductor elements 107 and 116 to at least two of the conductive traces 215 and 223 (fig. 2).

With regard to claims 2 and 14, Chun et al. disclose the semiconductor array 121 includes a plurality of vertical cavity surface emitting laser, VCSEL (col. 3, lines 1-10).

With regard to claims 3 and 15, Chun et al. disclose the semiconductor array 121 includes a plurality of detector (col. 2, lines 57-67).

With regard to claims 4 and 22, Chun et al. disclose the submount 102 includes a mounting well 139, where the semiconductor array 121 is in the mounting well 139, and where the semiconductor array 121 includes a top surface 138 that does not protrude from the mounting well 139 (fig. 1).

With regard to claims 5-6, 11, and 16, Chun et al. disclose each of the conductive traces and connectors 141, 142, and 144 includes a plurality of contact pads 104 and 106 (fig. 1).

With regard to claims 7-8 and 18-19, Chun et al. disclose an optical coupler 302 on the locating spacer 313 that extends from the submount 301, where the optical coupler 302 is aligned with the semiconductor array 121 (fig. 1 and 3).

With regard to claims 9 and 20, Chun et al. disclose the submount 102 and 202 includes ceramic (col. 2, lines 40-41 and col. 5, line 49).

With regard to claim 10, Chun et al. disclose at least one of the plurality of conductive vias 211 electrically connects to one of the conductive traces 203 (fig. 2).

With regard to claim 12, Chun et al. disclose a printed circuit board, PCB, 102 electrically connected to the conductive pad 104 (col. 2, lines 39-45 and fig. 1).

With regard to claim 13, in addition to the limitations disclosed in claim 1 above, Chun et al. also disclose:

- A submount 202 comprised a lower portion (fig. 2), a conductive trace 213 on the lower portion, an upper portion over the lower portion, and a plurality of conductive traces 223 on the upper portion, where the lower portion and the conductive trace on the lower portion extend beyond the upper portion (to reach the IC chip 207 and 208) to define a mounting surface of submount 202;
- A semiconductor array 121 comprised of a plurality of semiconductor elements 107 and 116, the semiconductor array being attached to the mounting surface 218 and is electrically connected to the conductive trace 226 on the lower portion (fig. 3).

With regard to claims 17 and 21, Chun et al. disclose a bonding connector 134 electrically connected to the contact pad 104 (fig. 1) and a PCB 102 electrically connected to the conductive pad 104 (col. 2, lines 39-45 and fig. 1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai-Sing Louie whose telephone number is (703) 305-0474. The examiner can normally be reached on 7:30 AM to 4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

wsf

March 2, 2003


LONG PHAM
PRIMARY EXAMINER